2009 Acadia National Park Research Grants Awarded
L.L. Bean Acadia Research Fellowships
Schoodic Research Fellowships

Thanks to the generous support of L.L. Bean, Inc. and Acadia Partners for Science and Learning, a total of eight Research Fellowships totaling $38,840 have been awarded in 2009 that will address important science issues at Acadia National Park. The National Park Service faces a number of increasingly complex issues that threaten the integrity of natural ecosystems, cultural resources, and visitor experiences at Acadia National Park. The successful management and protection of the park's resources and values depends upon scientifically credible and timely answers to important questions. Through the L.L. Bean Acadia Research Fellowship and Schoodic Research Fellowship programs, researchers are helping the National Park Service meet its stewardship responsibilities. Summaries of the 2009 funded studies are listed below.

Daniel Bunker, New Jersey Institute of Technology. ***Quantifying Invasive Species Risks; Traits, Trade-Offs, and Target Community Composition***. LL Bean Acadia Research Fellowship. Numerous exotic and invasive plants threaten natural habitats at Acadia National Park. This study will characterize a variety of biological traits of native and non-native understory shrubs to help in making better predictions about which exotic plants pose the greatest risk to park natural communities.

Timothy Divoll. University of Southern Maine and BioDiversity Research Institute. ***Coastal and Island Use by Bats in Relation to Potential Windpower***. LL Bean Acadia Research Fellowship. Through bat acoustic surveys, mist netting, and banding, this study will inventory bats found at a variety of sites within the Acadia Archipelago and assess the timing and habitats used during their migration. Results will provide the National Park Service with additional data about bat diversity and movements within Acadia National Park and contribute to a preliminary assessment of future coastal wind energy projects.

Kevin Dougherty and John Daigle. University of Maine. ***Rock Climbers' Experience and Attitudes Toward Management of Climbing in Acadia National Park; a Qualitative Approach***. LL Bean Acadia Fellowship. Increases in rock climbing since the park's Climbing Management Plan was written in 1995 have caused some crowding and resource impacts at popular climbing areas. This study will help to evaluate whether that plan is in need of any changes based on interviews with climbers. In addition, observations at selected climbing areas in the park will provide additional information about current climbing activity in the park.

Justin Havird. University of Florida. ***A Survey of Freshwater Fishes in the Streams of Acadia National Park***. LL Bean Acadia Research Fellowship. This study will generate the first detailed assessment of stream fish diversity at the park. Most fish surveys at the park have previously been focused in lakes and ponds.

Jeremy Long. Northeastern University. ***Causes of Spatial Variation in Barnacle Recruitment at Acadia National Park*.** LL Bean Acadia Research Fellowship. This study will evaluate the role of human trampling and other factors in controlling barnacle recruitment at Ship Harbor and Bass Harbor. While barnacles are abundant in the high intertidal in Acadia National Park, they are susceptible to human trampling. Other trampling studies have focused on adult barnacles. This research will test the hypothesis that newly settled "recruits" are especially vulnerable to tramplng.

Abraham Miller-Rushing. USA National Phenology Network and The Wildlife Society. ***Monitoring Phenology at Acadia National Park: Setting an Example for the National Park Service and Beyond***. Schoodic Research Fellowship. Phenology – the timing of seasonal biological events, such as flowering and migrations, may be among the most sensitive biological responses to climate change. This pilot study will test protocols to monitor phenological events using volunteers with the goal of devising a long-term phenology monitoring program for Acadia National Park and other national park locations.

(over)

Benjamin Tanner. Western Carolina University. ***Determination of Carbon Sequestration Rates in Salt and Freshwater Marshes in the Schoodic Section of Acadia National Park***. Schoodic Research Fellowship. This study will evaluate the long-term carbon storage potential in different marsh settings at the park. There is increasing interest from scientists and policy makers in finding sinks for atmospheric carbon and determining their importance in the global carbon cycle as it relates to climate change. Little research has previously been conducted in coastal Maine on the rate and dynamics of carbon storage in salt marshes. The results of this project will provide additional insights about marsh responses to future sea level rise.

Robin Verble. University of Arkansas, Little Rock. ***Do Invasive European Fire Ants Influence Arboreal Insect Diversity?*** LL Bean Acadia Research Fellowship. The European red fire ant is abundant at many locations in Acadia National Park. Previous research at the park documented that this invasive ant has a significant negative effect on native ground dwelling insects. This study will catalog and assess native insect diversity in the forest canopy in areas with and without the European red fire ant.